

Application No. 10/712,257  
Reply to Office Action  
August 14, 2006

### REMARKS

Claim 1 is amended. Claims 1-6 are presented for further examination.

Applicants acknowledge with appreciation the courtesies extended by Examiner Cooney during a brief telephonic interview held with Applicants' representative on August 14, 2006 regarding the rejection of claims 1-6 under 35 U.S.C. § 112, second paragraph. The indefiniteness rejection of claims 1-6 is respectfully traversed with respect to the amended claims.

Claim 1 has been amended to more clearly recite that the weight percent values for the binary blowing-agent mixture and the phosphorus compound are based on the premix as a whole (see also paragraph [0009] of the specification) and to recite that the premix consists essentially of at least one polyol, a phosphorous compound and a binary blowing-agent mixture. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112 are respectfully requested.

The rejection of claims 1-6 as obvious over Kruecke, DE 198 22 944 (equivalent to US 6,380,275), and the rejection of claims 1-6 as obvious over Kruecke, US 6,080,799 and US 6,380,275, are respectfully traversed.

Claims 1-6 are directed to a non-combustible premix. Claim 1 recites, in pertinent part, a non-combustible premix consisting essentially of at least one polyol, a phosphorous compound, and a binary blowing-agent mixture, which is a mixture of (a) HFC-365mfc and (b) HFC-134a, HFC-227ea or HFC-245fa. Notably, the HFC-134a, HFC-227ea or HFC-245fa are provided in an amount from 5 to 7% by weight of the blowing agent.

None of the cited references teach or suggest a non-combustible premix having the claimed composition. Further, even assuming a person of skill in the art were to try to create a non-combustible premix, there is nothing to suggest to that person how they might arrive at the claimed non-combustible premix or

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even that a non-combustible premix is possible. For at least the reasons that follow, the cited references fail to make out a proper, *prima facie* case of obviousness, and reconsideration and withdrawal of the rejections are respectfully requested.

Kruecke '275 discloses a blowing agent composition comprising HFC-365mfc and at least one additional blowing agent. Kruecke '275 does not disclose a non-combustible premix consisting essentially of at least one polyol, a phosphorous compound, and a binary blowing-agent mixture. Kruecke '799 discloses a non-combustible blowing agent mixture, but does not disclose a premix consisting essentially of at least one polyol, a phosphorous compound, and a binary blowing-agent mixture, much less that such a premix is non-combustible. Accordingly, reconsideration and withdrawal of the obviousness rejections are respectfully requested.

Moreover, even assuming *arguendo* that a *prima facie* case of obviousness had been made out, it would be effectively rebutted by the unexpected superior results achieved by the claimed compositions as set forth in the Declaration of Dr. Zipfel, which shows that the claimed premixes are unexpectedly and surprisingly non-combustible as compared with the compositions of the prior art. See *In re Margolis*, 228 USPQ 940 (Fed. Cir. 1986).

Pursuant to 37 C.F.R. § 1.132, Applicants submit herewith a corrected Declaration executed by Dr. Lothar Zipfel, the first named inventor of the present application. This Declaration is identical to the Declaration submitted on January 31, 2006, except for the correction of two clerical errors. In paragraph 7, the model of the flame point apparatus has been corrected from 384 to 364. In Table 1, the PFB:HFP ratio has been changed from (97:3) to (93:7) to be consistent with the (93:7) PFB:HFP ratio disclosed in paragraphs 8 and 14 and in Table 2.

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The Declaration sets forth facts establishing that the claimed premix composition is advantageously and unexpectedly non-combustible. Specifically, referring to paragraph 12 and Table 1, three inventive premix compositions were determined experimentally to have no measurable flash point, despite the expectation based on theoretical calculations that the flash-point of each composition would be in the range of -10° to 0°C. One with skill in the art would recognize such a distinction as an unexpected and surprising result.

Further, referring to Table 2, comparative data in columns 2, 3 and 4, which were obtained from samples comprising HFC-365mfc only, a 93:7 ratio of HFC-365mfc:HFC-227ea, and HFC-365mfc mixed with TCPP, consistently show a decrease in flash point for increased propellant/polyol concentrations. As stated in paragraph 16 of the Declaration, a decrease in the flash point is an undesired result.

The data in column 5, however, which correspond to samples comprising the 93:7 binary blowing agent mixture of HFC-365mfc and HFC-227ea to which TCPP has been added, show a surprising increase in the flashpoint. Applicants point out that the 93:7 ratio of HFC-365mfc:HFC-227ea is commensurate with the claimed range. Notably, the flashpoint of the sample comprising 8.7% propellant/polyol is greater than the flashpoint of the sample comprising 6.6% propellant/polyol, despite the trend that an increase in the concentration of propellant decreases the flashpoint. Further, no flash point at all was measured for the inventive composition comprising 25% propellant/polyol, whereas the flashpoints of the samples in columns 2 and 4 were the lowest measured. In Table 2, a double dash symbol "--" signifies that no data was taken at that composition.

These results support Dr. Zipfel's conclusion that a person of ordinary skill would not have expected that a premix, as claimed, would be non-combustible.

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Accordingly, the discovery of non-combustible premixes amounts to an unexpected and unforeseen result.

The non-statutory double patenting rejection of claims 1-6 over claims 1-25 of Kruecke, US 6,380,275, and the non-statutory double patenting rejection of claims 1-6 over claims 1-15 of Kruecke, US 6,080,799 in view of Hinz, US 5,552,450 are respectfully traversed.

The '275 and '799 Patents are discussed above. Neither reference, much less the attendant claims teaches or suggests a non-combustible premix as is presently claimed. Further, the present record lacks any showing of a motivation to a person of skill in the art to try to arrive at a non-combustible premix. Hinz, which was cited for teaching the addition of phosphorous agents, fails to remedy the deficiencies of the '799 Patent. Accordingly, the claims of the present application are not obvious variants of the claims of the '275 Patent or the '799 Patent, and reconsideration and withdrawal of the double patenting rejections are respectfully requested.

The provisional obviousness-type double patenting rejections of claims 1-6 over claims 1-20 of co-pending application no. 10/901,430, and claims 1-8 of co-pending application no. 10/207,824 in view of Hinz are believed overcome by the accompanying Terminal Disclaimers.

In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned at (202) 624-2845 would be appreciated since this should expedite the prosecution of the application for all concerned.

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If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #102623.52632US).

Respectfully submitted,


August 14, 2006

  
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Certificate of Facsimile Transmission

The undersigned hereby certifies that the foregoing Reply to Office Action, Declaration under 37 C.F.R. § 1.132, three month Petition for Extension of Time, and two Terminal Disclaimers are being transmitted to the U.S. Patent and Trademark Office by facsimile transmission to (571) 273-8300 this 14<sup>th</sup> day of August 2006.

  
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J. D. Evans